

Inevitably, a few improvements could be made. The target audience for this book is unclear: much of the writing is relaxed and entertaining, while in other parts data are presented in fairly raw form; tables are used in several places where figures could have been used to greater effect. While generally excellent, in places the writing is clumsy. Some technical terms are usefully defined (e.g. holotype), while other technical terms such as 'standard error' and 'sample size' (why not simply 'number of birds measured' for a lay reader?) are not. I also harbour a little disappointment at the production values. One of the most interesting figures, that of the satellite track of an individual bustard, is reproduced with such small font it is almost impossible to read the dates of the fixes or the nearby locations. At least one other figure (5.2) is virtually unreadable because of the small size of the reproduction, and minute uncoloured

patterns used; this is immediately followed by a similar larger figure, provided in colour, which is easy to read! A number of plates presented in colour could easily have made way for figures that require colour, and in at least a couple of cases the same photograph has been reproduced both in black and white and in colour. These concerns are unlikely to detract from the enjoyment of the book by most readers.

The Australian Bustard is an icon and deserves to have books written about it, and this offering would be a welcome addition to the bookshelf of anybody with an interest in Australian birds or natural history. The author's aim to 'convey some of the charm and mystery' of this species has been attained.

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## A Guide to the Beetles of Australia

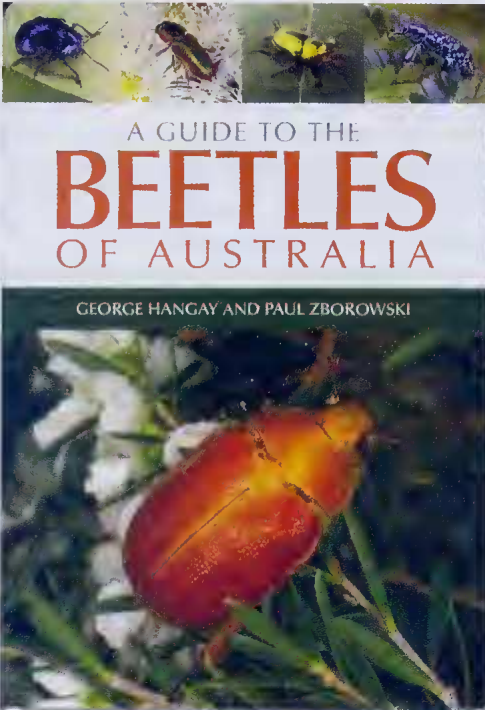
by George Hangay and Paul Zborowski

Publisher: CSIRO Publishing, Collingwood, Victoria 2010. 238 pages, paperback, colour photographs. ISBN 9780643094871. RRP \$44.95

In my early days of beetle interest, the popular literature available consisted mostly of sketchy works like those by John Child, Walter Froggatt, Charles French and Keith McKeown. The 1926 book by Robin Tillyard, *Insects of Australia and New Zealand*, was more detailed and professional but almost completely lacked photographs. Even Lawrence and Britton's 1994 adaptation of the CSIRO's 1991 authoritative account of Australia's beetles is now 17 years old and taxonomically somewhat out of date. Eric Matthews' eight volume work *A Guide to the Genera of Beetles of South Australia* is an extremely useful production but is principally a set of pictorial dichotomous keys to beetle genera rather than an ecological account of Australia's beetle families. Undoubtedly my most cherished book was *Gulliver in the Bush, wandering of an Australian Entomologist* of 1933 by the exemplary Australian coleopterist Herbert Carter, who produced a wonderful book of beetle collecting anecdotes, together with species lists of

unequaled precision and detail. Even so it's devoid of any beetle photographs and lacks any general account of biology or taxonomy of beetles. In contrast George Hangay and Paul Zborowski's book *A Guide to the Beetles of Australia*, presented in a similar style as Trevor Hawkeswood's 1987 book *Beetles of Australia* and Barry Moore's 1980-96 *A Guide to the Beetles of south-eastern Australia*, particularly excels in interesting and detailed information, and current taxonomic order and nomenclature, together with beautiful colour photographs. It has x + 238 A5 sized well bound, semi-gloss pages.

The introductory sections of the book make for fascinating reading. It starts with a general introduction of the abundance and ubiquity of beetles, their roles and relationships with humans, and the value of studying beetles, whether by amateurs or professionals. The following section titled 'What makes a beetle?' describes the unique morphological features of the group. The subsequent sections deal in detail with



beetle anatomy, reproduction and development, food and survival, and higher taxonomy.

The remainder of the book deals with family descriptions, and covers 91 of the 117 beetle families known to be represented in Australia. It is pleasing to see that a common name for each beetle family is included. The sequential placement of families largely follows that of Lawrence and Britton (1994) and the suborder and superfamily position is mentioned for each family. All of the family names are up to date, for example the name Sphaeriidae is used instead of Microsporidae and Bolboceratidae instead of Geotrupidae. The authors recognise that some families, such as Pselaphinae, Languriinae, Colydiinae, have been reduced in rank to subfamilies while the subfamily Ulodiinae has been raised to family level.

A very useful short list of the most important diagnostic characteristics is given for each family. The family accounts are invariably informative and interesting and provide information on both adult and larval stages. They include a description of some distinguishing morphological features, comments on behaviour and ecology

including feeding habits and the family's distribution within Australia. Finally, the number of Australian genera and species in each family is indicated. Occasionally an account is given of the more important or conspicuous subfamilies, especially of some of the larger families such as the scarabs, darkling beetles and leaf beetles. Scattered throughout the text of family descriptions are occasional vignettes on the biology of fascinating components of the fauna.

Representative specimens of each family are illustrated by excellent quality colour photographs, predominantly of living beetles, or by black and white or even colour drawings, mostly from CSIRO (1990) or Moore (1980-92). Many of the photographed beetles are specimens from North Queensland, giving the book a tropical flavour.

Included in the book are a very useful glossary and endnotes of 53 entries, predominantly pertinent references. There are two indices, one of common names and the other of scientific names.

In my opinion, *A Guide to the Beetles of Australia* is a very attractive and valuable handbook that adds substantially to the popular treatment of Australia's colourful and diverse world of beetle life. It will doubtlessly encourage enthusiasm, among children and adults alike, for this beautiful group of invertebrates. A greater awareness and experience of the natural world can not only provide endless enjoyment but can also promote an interest in nature conservation.

## References

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